

ABSTRACT

There is described a method for depicting a predetermined diffraction structure on a substrate by scanning an electron beam onto the substrate. The method includes the steps of: measuring a contour of the substrate so as to detect height errors in surface heights in comparison with specified values of a surface height distribution of the substrate; adjusting a depicting mode for depicting each of diffraction gratings, which constitute the predetermined diffraction structure, in response to the height errors detected in the measuring step, so as to compensate for a phase change of diffracted light caused by each of the height errors corresponding to each of the diffraction gratings; and depicting each of the diffraction gratings by scanning the electron beam onto the substrate, according to the depicting mode adjusted in the adjusting step. The depicting mode represents each spacing between the diffraction gratings or a dose of the electron beam.